BALANCED QUENCH PROTECTION CIRCUIT

Abstract of Disclosure

A superconducting magnet electrical circuit is provided for quench protection. A superconducting coil assemblage is provided including a plurality of spatially separated main and secondary magnet coil portions. The main magnet coil portions are connected in series to form at least one main coil series circuit. The secondary magnet coil portions are also connected in a series to form at least one secondary coil series circuit. At least one temperature limiting circuit is also provided. The temperature limiting circuit may be a quench heater circuit or a quench resistor circuit. The temperature limiting circuit has a plurality of quench heaters or a plurality of quench resistors connected with the superconducting coil assemblage. A superconductive switch is coupled with the superconducting coil assemblage.